

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

Paragraph beginning at Page 1, line 23:

Please refer to Figure 1, which shows a three-dimensional diagram of an image sensing chip, and generally the image sensing chip 10 is a complimentary metallic oxide semiconductor (CMOS) comprising: a glass plate 11, a carrier 12, and a printed circuit board 13; wherein a semiconductor being fixed in the middle of the printed circuit board 13 and having a plurality of conductive pads disposed on its external sides for receiving image signals through the glass plate 11. Please refer to Figure 2 for the description of the structure of the image sensing chip 10. The printed circuit board 13 is composed of a semiconductor 131, a conductive wire 132, and a substrate 133. The printed circuit board 13 is adhered onto the carrier 12, and then the glass plate 11 is mounted onto the carrier 12 to finish with the manufacture of the image sensing chip. The conventional image sensing chip [generallyutilizestheceramicleadchipcarrier] generally utilizes the ceramic leaded chip carrier (CLCC) process for the manufacture, i.e. using ceramic carrier 12 as the package material for the process. Ceramic that has the characteristics of high hardness, thermal resistance, stability, and inactiveness is a very suitable material to be used for making the carrier. However, its source mainly comes from foreign suppliers that leads a high price, and in turn causes the total manufacture cost to increase in a large fold. Furthermore, during the manufacturing of the image sensing chip, the pressure of its interior must be greater than the atmospheric pressure. Therefore, when the image sensing chip being installed onto a device for use, the moisture of the air will enter into the image sensing component due to the change of pressure, and the water vapor will permeate the image sensing chip easily and hence

shorten the lifespan of the chip. Therefore, it is necessary to keep the internal pressure larger than the atmospheric pressure during the chip manufacturing.

Paragraph beginning at Page 4, line 33:

In Figure 1, an image sensing chip 10 is generally a complimentary metallic oxide semiconductor (CMOS) used in the optical image capture devices such as optical disk drives, digital cameras, or scanners, comprising a glass plate 11, a carrier 12, and a printed circuit board 13, wherein a semiconductor 131 is fixed in the middle of the printed circuit board 13 and has a plurality of conductive pads being formed on the external edge of the semiconductor 131 for receiving video signals through the glass plate 11. Figure 2 illustrates the layer structure of the image sensing chip 10 as illustrated in figure 1, [of which] wherein the printed circuit board 13 further comprises a semiconductor 131, a conductive wire 132, and a substrate 133, as illustrated in figure 3. The printed circuit board 13 is adhered onto the carrier 12, and then the glass plate is mounted onto the carrier 12 so as to complete the manufacture of the image sensing chip. The detailed manufacture process of the image sensing chip will be elaborated in later sections.

Paragraph beginning at Page 6, line 4:

Firstly, as shown in figure 3, the present invention has to achieve the automation for the manufacturing process of the image sensing chip 10, as shown in figure 1. T[t]he tray 20, as shown in Figure [3] 2, is used. Such tray 20 has a plurality of accommodating grooves 21, and each accommodation groove 21 penetrates the tray 20, and the surface area of the upper opening

is approximately equal to that of the image sensing chip 10 and the surface area of the lower opening is slightly smaller than that of the upper opening, so that each of the same type of components (glass board 11, carrier 12, and printed circuit board 13) are accommodated into individual trays for processing. Hereafter, the description of the specification will use the following terms "main tray", "first tray" and "second tray" without numbering to indicate the tray 20. Please take the present invention for example, a plurality of printed circuit boards 13 are placed into a main tray (because it is unnecessary to remove the print circuit board 13 during the entire manufacturing process), a plurality of carriers 12 into a first tray, and a plurality of glass plates 11 into a second tray. In addition, to attain the automation for the process, the tray 20 also has a chip adhering mark 22 being disposed on a lateral side of the chip, and a conductive wire adhering mark being disposed on the corresponding side. Therefore, the tray 20 can be fixed in position by means of the chip adhering mark 22 and the conductive wire adhering mark 23 in the chip adhering step of the conductive wire adhering process. The entire manufacturing process can be accomplished by using the same tray 20. Of course, the tray 20 is not limited to the use for the PLCC packaging process, but it can be applied to the CLCC manufacturing process or other packaging process.

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Amended) A packaging process for an image sensing component of which comprising a printed circuit board, a carrier, and a glass plate; wherein [a plurality of] said printed circuit board, said carrier[s], and said glass plate[s] being placed in a main tray, a first tray, and a second tray respectively for said packaging process, comprising the steps of;

performing a rinsing process on [the] said printed circuit board, said carrier, and said glass plate in [the] said main tray, [the] said first tray, and [the] said second tray respectively as a pre-treatment;

dispensing [the] said printed circuit board, and then capturing [the] said carrier[s] in [the] said first tray onto each of [the] said printed circuit board of [the] said main tray;

performing a thermal pressing process and an adhering process on [the] said printed circuit board and [the] said carrier;

dispensing [the] said glass plate, and then collecting [the] said carrier in [the] said first tray to each said printed circuit board of [the] said main tray; and

adhering [the] said glass plate onto [the] said carrier by thermal pressing in the high-pressure working environment.